ABSTRACT

New protective coating layers for use in wet etch processes during the production of semiconductor and MEMS devices are provided. The layers include a primer layer, a first protective layer, and an optional second protective layer. The primer layer preferably comprises an organo silane compound in a solvent system. The first protective layer includes thermoplastic copolymers prepared from styrene, acrylonitrile, and optionally other addition-polymerizable monomers such as (meth)acrylate monomers, vinylbenzyl chloride, and diesters of maleic acid or fumaric acid. The second protective layer comprises a highly halogenated polymer such as a chlorinated polymer which may or may not be crosslinked upon heating.